

**WHAT IS CLAIMED IS:**

- 1 1. A method of purifying used oil comprising the steps of:  
2 providing a predetermined quantity of used oil;  
3 contacting the used oil with a predetermined quantity of a base;  
4 contacting the used oil with a predetermined quantity of a phase transfer  
5 catalyst;  
6 mixing the composition comprising used oil, base, and phase transfer catalyst for  
7 a predetermined period of time;  
8 heating the composition to a predetermined temperature;  
9 distilling the resultant mixture;  
10 mixing the resulting distillate with a solvent thereby dissolving the contaminants  
11 from the petroleum distillate into the solvent;  
12 separating the solvent having the contaminants dissolved therein from the  
13 petroleum distillate;  
14 subsequently separating the contaminants from the solvent and recovering the  
15 solvent;  
16 recovering any remaining solvent from the petroleum distillate; and  
17 reusing the recovered solvent to extract contaminants from subsequent  
18 quantities of petroleum distillate.
- 1 2. The method of Claim 1 wherein the distilling step removes water and catalyst and  
2 produces base lubricating oil from the mixture.
- 1 3. The method of Claim 1 wherein the distilling step produces at least two base lubricating  
2 oil cuts, and wherein the subsequent mixing step is carried out by separately mixing each of the  
3 base lubricating oil cuts with the solvent.